AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A clutch connection/disconnection detection system for a single-cylinder engine, for detecting the connection/disconnection of a clutch intermediately provided between a crankshaft of said single-cylinder engine and a power transmission mechanism that transmits the output of said crankshaft comprising:

a rotation variation coefficient detector that detects the rotation variation coefficient of said crankshaft, the rotation variation coefficient being a coefficient that changes with engine speed; and

a decision mechanism that decides the connection/disconnection of said clutch by comparing said rotation variation coefficient detected by said rotation variation coefficient detector with a preliminarily determined threshold,

wherein the rotation variation coefficient is a ratio of the time of a compression stroke and an exhaust stroke of the engine with respect to the time for two revolutions of the crankshaft.

2. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 1, wherein said threshold is preliminarily set according to engine speed.

3. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 1, and further including a rotating disk operatively connected to the crankshaft for rotation therewith and a pulser displaced a predetermined distance relative to the rotating disk for detecting the rotation thereof.

4. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 3, wherein a plurality of projections extend from the rotating disk and said pulser detects each projection during rotation for outputting a pulse signal for each time a projection is detected.

5. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 4, wherein nine projections extend from the rotating disk and wherein pulse signals for stages 0 to 17 are assigned during two revolutions of the crankshaft.

6. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 5, wherein stages 4 to 6 correspond to a combustion stroke of the engine.

7. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 5, wherein stages 7 to 12 correspond to an exhaust stroke of the engine.

8. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 5, wherein stages 13 to 15 correspond to an intake stroke of the engine.

9. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 5, wherein stages 16 to 3 correspond to a compression stroke of the engine.

10. (Original) The clutch connection/disconnection detection system for a single-cylinder engine as set forth in claim 1, wherein the rotation variation coefficient is calculated as follows:

TSRAT = (TSA4-TSH4)/ME4U

where: TSRAT is the rotation variation coefficient,

TSA4 is the time of a compression stroke of the engine,

TSH4 is the time of the exhaust stroke of the engine, and

ME4U is the time for two revolutions of the crankshaft.

11. (Currently Amended) A method for detecting clutch connection/disconnection for a single-cylinder engine, for detecting the connection/disconnection of a clutch intermediately provided between a crankshaft of said single-cylinder engine and a power transmission mechanism that transmits the output of said crankshaft, said method comprising the following steps:

detecting a rotation variation coefficient of said crankshaft, the rotation variation coefficient being a coefficient that changes with engine speed; and

deciding the connection/disconnection of said clutch by comparing said rotation variation coefficient of the crankshaft with a preliminarily determined threshold,

wherein the rotation variation coefficient is a ratio of the time of a compression stroke and an exhaust stroke of the engine with respect to the time for two revolutions of the crankshaft.

12. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 11, wherein said threshold is preliminarily set according to engine speed.

13. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 11, wherein the detecting step includes a rotating disk operatively connected to the crankshaft for rotation therewith and a pulser displaced a predetermined distance relative to the rotating disk for detecting the rotation thereof.

14. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 13, wherein a plurality of projections extend from the rotating disk and said pulser detects each projection during rotation for outputting a pulse signal for each time a projection is detected.

15. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 14, wherein nine projections extend from the rotating disk and wherein pulse signals for stages 0 to 17 are assigned during two revolutions of the crankshaft.

16. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 15, wherein stages 4 to 6 correspond to a combustion stroke of the engine.

17. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 15, wherein stages 7 to 12 correspond to an exhaust stroke of the engine.

18. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 15, wherein stages 13 to 15 correspond to an intake stroke of the engine.

19. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 15, wherein stages 16 to 3 correspond to a compression stroke of the engine.

20. (Original) The method for detecting clutch connection/disconnection for a single-cylinder engine as set forth in claim 11, wherein the rotation variation coefficient is calculated as follows:

$$TSRAT = (TSA4-TSH4)/ME4U$$

where: TSRAT is the rotation variation coefficient,

TSA4 is the time of a compression stroke of the engine,

TSH4 is the time of the exhaust stroke of the engine, and

ME4U is the time for two revolutions of the crankshaft.

21. (Previously Presented) A clutch connection/disconnection detection system for a single-cylinder engine for detecting the connection/disconnection of a clutch intermediately provided between a crankshaft of said single-cylinder engine and a power transmission mechanism that transmits the output of said crankshaft comprising:

a rotation variation coefficient detector that detects the rotation variation coefficient of said crankshaft; and

a decision mechanism that decides the connection/disconnection of said clutch by comparing said rotation variation coefficient detected by said rotation variation coefficient detector with a preliminarily determined threshold,

wherein said decision mechanism decides that said clutch is connected when said rotation variation coefficient is below the preliminarily determined threshold and that said clutch is disconnected when said rotation variation coefficient is above the preliminarily determined threshold.

22. (Previously Presented) A method for detecting clutch connection/disconnection for a single-cylinder engine for detecting the connection/disconnection of a clutch intermediately provided between a crankshaft of said single-cylinder engine and a power transmission mechanism that transmits the output of said crankshaft, said method comprising the following steps:

detecting a rotation variation coefficient of said crankshaft; and

deciding the connection/disconnection of said clutch by comparing said rotation variation coefficient of the crankshaft with a preliminarily determined threshold,

wherein the step of deciding decides that said clutch is connected when said rotation variation coefficient is below the preliminarily determined threshold and that said clutch is disconnected when said rotation variation coefficient is above the preliminarily determined threshold.

23-24. (Canceled)